

Claims

- [c1] What is claimed is:
1. A method for calculating an initial security count value for a new channel in a wireless communications device, the wireless communications device comprising:
 - a first security key;
 - a second security key; and
 - a plurality of established channels, each established channel having a corresponding security count value and utilizing a security key, at least one of the established channels utilizing the first security key;the method comprising:
 - assigning the second security key to the new channel;
 - utilizing a first set to obtain a first value, the first set consisting of corresponding security count values of the established channels that utilize the second key, the first value being at least as great as the x most significant bits (MSB_x) of a value in the first set; and
 - setting the MSB_x of the initial security count value for the new channel equal to the first value;wherein if the first set is empty, then the first value is set to a first predetermined value.
 2. The method of claim 1 wherein the first predetermined value is zero.
 3. The method of claim 2 wherein the first value is at least as great as the MSB_x of the greatest value in the first set.
 4. The method of claim 3 wherein the first value is greater than the MSB_x of the greatest value in the first set.
 5. A method for providing an initial security count value to a new channel in a wireless communications device, the method comprising:
 - establishing at least a first channel, each first channel utilizing a first security key and having a corresponding security count value;
 - performing a security mode reconfiguration to change utilization of each first channel from the first security key to a second security key according to an activation time for each first channel; wherein upon utilization of the second security key, the corresponding security count value for the first channel is changed;

initiating establishment of a second channel that utilizes the second security key;
 utilizing a first set to obtain a first value, the first set consisting of corresponding
 security count values of the established channels that utilize the second key, the first
 value being at least as great as the x most significant bits (MSB_x) of a value in the first
 set; and
 setting the MSB_x of the initial security count value for the second channel equal to the
 first value;
 wherein if the first set is empty, then the first value is set to a first predetermined value.

- [c6] 6. The method of claim 5 wherein the first set includes the corresponding security count values of all first channels utilizing the second security key when initiating the establishment of the second channel.
- [c7] 7. The method of claim 6 wherein the predefined value is zero.
- [c8] 8. The method of claim 5 wherein the first value is at least as great as the MSB_x of the greatest value in the first set.
- [c9] 9. The method of claim 8 wherein the first value is greater than the MSB_x of the greatest value in the first set.